CLAIMS

What is claimed is:

1. A series device of protection against a heating of a parallel protection element of an equipment of a telephone line, including:

a bi-directional cut-off element of normally on state, in series with the parallel protection element;

a temperature detection element; and

a switching element adapted to turning off the cut-off element when the temperature detected by the detection element exceeds a predetermined threshold.

2. The device of claim 1, wherein the switching element is a normally-off bi-directional element.

3. The protection device of claim 1, wherein said cut-off element includes two cut-off thyristors assembled in antiparallel and each having a resistor connected between its anode and cathode gates.

4. The protection device of claim 3, wherein said switching element includes two control thyristors, respectively a cathode-gate thyristor and an anode-gate thyristor, which are respectively associated with the anode and cathode gates of the cut-off thyristors.

5. The protection device of claim 4, wherein each control thyristor of the switching element has its gate connected to a midpoint of a resistive dividing bridge having one of its resistive elements formed of a positive coefficient thermistor.

6. The protection device of claim 4, wherein each control thyristor of the switching element has its gate connected to a midpoint of a resistive dividing bridge via respective series connection of diodes.

7. The protection device of claim 4, wherein a diode is interposed between the anode-gate control thyristor and the cathode gate of the cut-off thyristor with which it is associated.

8. The protection device of claim 1, further including a single semiconductor substrate having the bi-directional cut-off element, the temperature detection element, and the switching element integral formed thereon.

9. The protection device of claim 1, wherein the temperature detection element detects the temperature of the parallel protection element.

10. The protection device of claim 1, wherein the temperature detection element is integrated in the same semiconductor substrate as the parallel protection element.

11. A protection circuit comprising:

a parallel protection element;

a cut-off circuit in a normally on state, in series with a mains power to the parallel protection element ;

a temperature detection element positioned adjacent to the parallel protection element; and

a switching element coupled to the temperature detection element and receiving a signal when a temperature sensed by the temperature detection circuit is above a threshold value.

12. A method of protecting equipment comprising:

supplying power to the equipment via a cut-off element;

placing a voltage on the equipment;

placing the same voltage on a load circuit that is on the equipment;

sensing the temperature of the load circuit; and

shutting off the power to the mains equipment when the temperature of the load circuit exceeds a selected value.